

AMENDED CLAIMS

1.

A method for strengthening a gear wheel (1), wherein strengthening rings (3,4) are placed around the gear wheel and connected to the gear wheel teeth (2), characterised in that each tooth (2) is fixed like a theoretical beam between two extreme points in that two strengthening wheels (3, 4), each shaped on its inside in conformity with the gear wheel teeth (2), are shrink-fitted around the gear wheel.

2.

A method according to claim 1, characterised in that the strengthening rings (3, 4) are shrink-fitted around the gear wheel (1) in such manner that the strengthening rings (3, 4) will be firmly shrunk onto the gear wheel (1) with a material-technical tensile/-compressive strength within 80% of the 0.2% elastic elongation range of the material (steel).

3.

A method according to claim 2, characterised in that during the sizing process the toothed rim of the driving gear (1) is envisaged stretched out to a correspondingly larger circle, shrink fits being selected for this circle in accordance with the ISO tables of limits and fits, and that similar considerations are made for each strengthening ring (3, 4).

4.

A gear wheel (1) having surrounding strengthening rings (3,4) connected to the gear wheel teeth (2), characterised in that each tooth (2) is fixed like a theoretical beam between two extreme points in that two strengthening rings (3, 4), shaped on their insides in conformity with the gear wheel teeth (2), are shrink-fitted around the gear wheel.

5.

A gear wheel according to claim 4, characterised in that the strengthening rings (3, 4) are shrink-fitted in such manner that the strengthening rings (3, 4) will be firmly shrunk onto the gear wheel (1) with a material-technical tensile/compressive strength within 80% of the 0.2% elastic elongation range of the material (steel).